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EXAMINER				
CHEUNG, WILLIAM K				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/541,330

Applicant(s)

SAGAWA ET AL.

Examiner

WILLIAM K. CHEUNG

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-10 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-10 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Request for Continued Examination

1. The request filed on April 13, 2009 for a Request for Continued Examination (RCE) under 37 CFR 1.53(d) based on parent Application No. 10/541,330 is acceptable and a RCE has been established. An action on the RCE follows.
2. The examiner acknowledges the petition decision "Granted" of June 4, 2009. In view of the amendment filed July 23, 2009, claims 7, 11-14 have been cancelled. Claims 1-6, 8-10, 15 are pending.

Claim Rejections - 35 USC § 112

- 3 The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-6, 8-10, 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 (line 4), the recitation "nonionic surfactant comprising a condensation product of polyethylene oxide ($n=10-90$) and octyl phenol or nonyl pheno" is not described in the original specification. Therefore, it is considered "new matter". Although applicants argue that the newly recited feature is supported by a document "WO 2004/067579 A1", the examiner still could not find the support in the English translated document filed January 10, 2008 for WO2004/067579 A1. Therefore, the 112 rejection set forth October 9, 2007 is proper. Applicants are required to submit an amendment to have the "new matter" removed.

Applicant's arguments filed July 23, 2009 have been fully considered but they are not persuasive. Applicants argue that the lack of support for the new matter is a result of an error that is recognizable or obvious to one of ordinary skill in art as evident from the PCT application filed and the specification of the instant application. However, applicants fail to recognize that 112 rejection can not be resolved by clarifying the typographical error between the specification of instant application and the PCT application because the reasons for the 112 rejection is because applicants' priority document fail to support the claimed subject matter " $n=10-90$ ". Applicants must recognize that the support of the claimed invention must be disclosed in the original specification (for the instant issue, it is the specification of the priority document) in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. According to the priority document filed, paragraph 0014 clearly provides the support of $C_{12}-C_{18}$ alkyl amines, but not for polyethyleneoxide having $n=10-90$, because the priority

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document only disclose polyethyleneoxide with no specific information on $n=10-90$ nor $n=10-19$.

【0014】

乳化剤として作用する界面活性剤としては、好ましくはポリエチレンオキサイド系ノニオン性界面活性剤およびカチオン性界面活性剤の少くとも一種が、共重合体に対して1~20重量%、好ましくは5~15重量%の割合で用いられる。ポリエチレンオキサイド系ノニオン性界面活性剤としては、ポリエチレンオキサイドとヘキシルフェノール、オクチルフェノール、ノニルフェノール、多環フェニルエーテル、ヘキサデカノール、オレイン酸、 C_{12} ~ C_{18} のアルキルアミン、ソルビタンモノ脂肪酸等との縮合生成物が用いられ、好ましくはポリエチレンオキサイドとオクチルフェノールまたはノニルフェノールとの縮合生成物が用いられる。また、カチオン性界面活性剤としては、第4級アンモニウム塩、例えばステアリルトリメチルアンモニウムクロライド、ドデシルトリメチルアンモニウムアセテート、ドデシルトリメチルアンモニウムクロライド、トリメチルアンモニウムテトラデシルクロライド、トリメチルアンモニウムヘキサデシルクロライド、トリメチルアンモニウムオクタデシルクロライド、ドデシルベンジルジドデシルトリメチルアンモニウムクロライド、ドデシルメチルジ(ポリオキシエチレン)アンモニウムクロライド、ジメチルアンモニウムジオクタデシルクロライド等やアルキルピリジニウム塩が用いられる。

Priority document

of the copolymers. The polyethylene oxide-based nonionic surfactant includes, for example, condensation products of polyethylene oxide with hexylphenol, octylphenol, nonylphenol, polycyclic phenyl ether, hexadecanol, oleic acid, alkylamines of C_{12} to C_{18} , sorbitan monofatty acid, etc., particularly a condensation product of polyethylene oxide with octyl phenol or nonyl phenol. The cationic surfactant includes, for example, a

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1-6, 8-10, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US 6,387,292) in view of Hara et al. (US 2003/0114547 A1), for the reasons adequately set forth from paragraph 4 of the office action of April 7, 2008.

Claim 1 (Previously presented): A process for preparing an aqueous dispersion which comprises subjecting (meth)acrylate containing a polyfluoroalkyl group and a polymerizable monomer free of fluorine atoms to an emulsification treatment in the presence of water, a nonionic surfactant comprising a condensation product of polyethylene oxide (n= 10-90) and octyl phenol or nonyl phenol and a cationic surfactant, and a polypropyleneglycol-based compound having a molecular weight of 250 to 5,000, followed by copolymerization reaction in the presence of a polymerization initiator.

Saito (col. 3, line 57; abstract) discloses a process of preparing an anti-soil composition in the form of an aqueous dispersion comprising a fluoroalkyl group-containing monomer with a polymerizable monomer free of fluorine atoms, and polypropylene glycol having an average molecular weight of not more than 1,000. Saito (col. 2, line 12-13) disclose a C₁₂-fluoroalkyl group containing monomer. Saito (col. 3, line 10-20) disclose a list of polymerizable monomers that include cyclohexyl (meth)acrylate, benzyl (meth)acrylate, stearyl (meth)acrylate, acrylamide. The disclosed stearyl (meth)acrylate of Saito (col. 3, line 10-20) generically includes stearyl acrylate in view of claim 2 of Saito, where a (meth)acrylate ester also includes an acrylate ester. Saito clearly indicate using a polymerization initiator (col. 4, line 67), and surfactants (col. 5, line 65 to col. 6, line 7). Saito (col. 4, example 1) disclose a formulation comprising at least 10 wt% of polyfluoroalkyl groups. Saito et al. (col. 6, line 8-12) describe the process of preparing an aqueous dispersion comprising water.

Regarding the claimed non-ionic surfactant, Saito (col. 5, line 65 to col. 6, line 3) clearly disclose the use of non-ionic surfactants based on polyethylene glycol and octyl or nonyl phenol.

Just as argued, the difference between the invention of claims 1-6, 8-10, 15 and Saito is that the process of Saito prepares the polymers before the emulsification step with water while the invention of claims 1-6, 8-10, 15 involves adding water first.

However, since Saito discloses all the critical steps as claimed, but in different order, and since the mixing the order of the processing steps would not affect the outcome of obtaining an aqueous dispersion, the examiner has a reasonable basis that

the differences in processing steps are considered obvious, *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946) (selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results); *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930) (Selection of any order of mixing ingredients is prima facie obvious.), the rearrangement of steps in a disclosed invention is considered obvious.

The difference between the invention of claims 1-6, 8-10, 15 is that Saito is silent on a process comprising the use of cationic surfactants.

Hara et al. (abstract; page 1, 0014 to page 2, 0033) disclose a process for preparing a dispersion of fluorine-containing polymer. Further, Hara et al. (page 2, 0036-0038) clearly teach the combination use of different types of surfactants, which includes cationic surfactants (page 2, 0037) and nonionic surfactants (page 2, 0038) as claimed. Motivated by the expectation of success of preparing a dispersion that the impart water-repellent properties to substrates (abstract), it would have been obvious to one of ordinary skill in art to incorporate the combination use of cationic surfactants and non-ionic surfactants as taught in Hara et al. into the Saito to obtain the invention of claims 1-6, 8-10, 15.

In view of the 112 rejection set forth for the introduction of "new matter" into the claims, the instant rejection is proper.

Response to Arguments

7. Applicant's arguments filed January 9, 2008 and January 10, 2008 have been fully considered but they are not persuasive. Applicants argue the 103 rejection should be withdrawn because the teachings of Saito et al. (col. 5, line 65 to col. 6, line 7) is a comparative example that results a polymerization process that forms gels, not an aqueous dispersion. However, the examiner disagrees because the invention as claimed does not require the claimed process to be successful in preparing an aqueous dispersion. As long as Saito et al. (col. 5, line 65 to col. 6, line 7) disclose the intent for preparing an aqueous dispersion is considered adequate. Applicants must recognize that Saito et al. in examples 1-4 (col. 4-5) have indicated the process disclose is to prepare an aqueous dispersion (milky white solution).

Further, in view of the 112 rejection set forth, claims 1-6, 8-10, 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (US 6,387,292) in view of Hara et al. (US 2003/0114547 A1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William K Cheung/
Primary Examiner, Art Unit 1796

William K. Cheung, Ph. D.
Primary Examiner
August 7, 2009